MULTILAYER LOSSLESS DATA COMPRESSION ACROSS A NETWORK

BACKGROUND OF THE INVENTION

1. Field of Invention

The present invention is directed to a method and apparatus for lossless data compression and transmission across a network.

2. Description of Related Art

Presently, networks are used for the transmission of data. To accommodate limited bandwidth and speed requirements, data is often compressed before transmission across a network. Because of cost and processing requirements, the data is often compressed off-line, stored as a compressed file, and then transmitted across the network.

Unfortunately, off-line compression does not accommodate real-time data because of the delays encountered in the compression, storing, and transmission process. For example, on-line stock traders require up to date stock quotes substantially instantaneous with the fluctuations in the stock prices. This requirement is not satisfied with off-line compression.

On-line compression may be used to compress data on -line. Unfortunately, high quality on-line real-time compression is expensive and therefore not available to the majority of users. Furthermore, on-line compression is not feasible unless both the sender and the receiver of the data employ the same compression algorithms. Thus, existing compression schemes are not effective for wide spread use by multiple users transmitting and receiving multiple formats of data.

SUMMARY OF THE INVENTION

The present invention provides a method and apparatus for compressing and transmitting data in real-time across a network. According to one embodiment, packets